

lower teeth **30** when the mouth **32** is open a sufficient amount to enable adequate working space. Preferably, the distance between free ends of the arms **14**, **16** is approximately between 1.125 inches and 1.500 inches, and the distance between the ends of the arms **14**, **16** at the bight portion **12** is preferably between 0.250 and 0.750 inches. Of course, the sizes may vary depending on the intended use. For instance, a pediatric bite block would be smaller. Further, the bight portion **12** flexes, allowing arms **14** and **16** to move toward one another to accommodate smaller mouth **32** openings when the block **10** is engaged by the teeth **30**.

The outside convex portion of the bite block **10** includes a channel **20** defined by a bottom portion **22** and sidewalls **24**. The bottom portion **22** includes a textured exterior surface **50** adapted to better grip the teeth **30** and prevent the block **10** from slipping. Preferably, the textured surface **50** comprises a series of serrations extending between and normal to the sidewalls **24**. As shown, each serration has a cross section generally forming a right triangle; other geometric shapes, however, are contemplated including other triangles, such as an isosceles triangle. Further, other surface textures, such as knurling, can be applied to the bottom portion **22** to generate the teeth-gripping surface. Further, the sidewalls **24** prevent the block **10** from slipping or dislodging in a sideways direction when the teeth **30** rest in the channel **20**. Moreover, the sidewalls **24** of the channel **20** add stability to the bite block **10** by resisting flexure at the bight portion.

Preferably, the channel **20**, and particularly the textured exterior surface **50** of the bottom portion **22**, is made of a resilient material, such as santoprene, having a softer durometer than the material comprising the remainder of the block **10**. Thus, the block **10** is preferably molded from a pair of polymer plastics such that the bottom portion **22** and the channel **20** are made of the same base material but have different durometers, or are made of different materials that are bonded to one another. To simplify the molding process, a two-step overlay injection molding process is preferred for manufacturing the bite block **10**. In one embodiment of the block **10**, for example, the block **10** is formed from polypropylene via a first injection molding step. Once the block **10** has hardened, it is trimmed and the channel **20** is injection molded directly onto the block **10** in a second injection molding step. As noted above, the channel **20** is preferably made from santoprene, which will bond securely to the polypropylene block **10** during the second injection molding step without any adhesive. Of course, other materials having similar properties can be used, and the two pieces can be molded separately and bonded together with adhesive. Alternatively, the textured surface **50** can be integrally formed with the block **10** as a single unit out of the base material.

Because the block **10** is substantially U-shaped, its inner or concave portion partially defines a void **40**. When the block **10** is inserted in the patient's mouth, the void **40** provides room for the dentist or assistant, or both, to have additional working area within the mouth **32**, and further facilitates placement of instruments such as drill (not shown) or a vacuum (not shown) in the mouth **32** of the patient. Moreover, visibility for the dentist or assistant into the mouth **32** is enhanced. The bite block **10** does not interfere with the working area of the dentist as prior mouth props have done.

The bight portion **12** avoids the need for several different sizes of bite blocks, as is common with prior bite block designs. When the bite block **10** is inserted into the patient's mouth **32**, the bight portion **12** flexes slightly such that arms

14 and **16** approach one another in the void **40** to accommodate the size of the particular patient's mouth **32**. Thus, to facilitate flexing, the block **10** includes a thin flexible portion **42** of the bight portion **12**. The thinner portion **42** is flanked by strengthening ribs **44**, which are disposed on opposite outer edges of the bight portion **12**. The ribs **44** strengthen the bight portion **12**, whereby the bight portion **12** provides adequate resistance to biting forces exerted on the arms **14** and **16** by the teeth **30** so that the dentist can continue working even when the patient bites down hard on the block **10**. By design, however, the bite block **10** permits the patient to rest the teeth **30** within the channel **20** while the patient's jaw relaxes.

The bite block **10** allows the dentist and assistant access to the patient's mouth **32** from any direction. This design increases the safety of the patient, doctor, and the assistant while preparing or operating within the patient's mouth **32**.

Reasonable variation and modification are possible within the spirit of the foregoing specification and drawings without departing from the scope of the invention.

What is claimed is:

1. A bite block for facilitating a dentist's access to a patient's mouth comprising an open-ended, U-shaped body including a pair of arms extending from a bight portion, thereby defining a void that is bounded in part by the arms and the bight portion, the bight portion including strengthening ribs extending between the arms, whereby when the bite block is positioned between upper and lower teeth of the patient's mouth the dentist will have access to the patient's mouth through the void.

2. A bite block according to claim 1 wherein the strengthening ribs are disposed on opposite outer edges of the bight portion.

3. A bite block according to claim 1 wherein the arms include a textured exterior surface adapted for aiding traction on the bite block by the upper and lower teeth.

4. A bite block according to claim 3 wherein the textured exterior surface and the arms are made from polymer plastics having different durometers.

5. A bite block according to claim 4 wherein the plastic polymer of the textured exterior surface is a softer durometer than the polymer plastic of the arms.

6. A bite block according to claim 5 wherein the polymer plastic of the textured exterior surface is santoprene, and the polymer plastic of the arms is polypropylene.

7. A bite block according to claim 5 wherein the textured exterior surface includes a series of serrations.

8. A bite block according to claim 7 wherein the series of serrations is longitudinally flanked by side walls disposed transversely to the series of serrations, whereby the upper and lower teeth are restrained on the bite block.

9. A bite block according to claim 3 wherein the textured exterior surface is longitudinally flanked by side walls, whereby the upper and lower teeth are confined to the textured exterior surface on the bite block.

10. A bite block according to claim 3 wherein the textured exterior surface includes a series of serrations.

11. A bite block according to claim 10 wherein the series of serrations is longitudinally flanked by side walls disposed transversely to the series of serrations, whereby the upper and lower teeth are restrained on the bite block.

12. A bite block for facilitating a dentist's access to a patient's mouth comprising an open-ended U-shaped body including a pair of arms extending from a bight portion, thereby defining a void that is bounded in part by the arms in the bight portion, the bight portion including at least one strengthening rib extending between the arms, whereby